

commerce, of competition between the cables and the Chinese guidelines, that it might be well

It is allowed even by the opponents of the Cripple Companies that with equal rates the companies would take the most of the profits and the Chinese merchants get only a fraction.

Assuming now that the rates be followed by the Chinese Indians to Europe --

The Cripple Companies would be ruined and the rates will cripple and lameness would again be equal, with the above said, only that the Chinese and the Company would now make as much less in proportion to the lower rates. They would both have to support the entire reduction

It is easy to see that such reduction would leave the Cable Companies (and the Chinese) with a loss long before the amount offered for "one dollar note" was reached. The estimates being all along maintained by both, and their out-payments to attache administrations being equal, viz \$5.44.

The companies could not count upon Government subsidies, nor could they take their cables to other places. They would probably not be found willing to work their very long at a loss, or they might eventually be compelled to retire from the field. They would probably find ready purchasers among the Government interested in keeping up telecommunication with the East, and their value in this respect, thus pass into the hands of the Chinese Government or the Chinese Telegraph Administration, which prac-

It is pretty certain, however, that the Chinese to themselves are evidenced by an article in the *Shanghai*—that any restriction in telegraphic rates would ultimately lead to the loss of the foreign merchants. But to make common sense and that, says the *Cable*, the companies run off the field, the Chinese Government would be particularly anxious not to permit on any of its territory the land cables anywhere in China. The designers in the open ports and elsewhere in China would be this entirely in the hands of the foreign telegraphic companies, which was a very serious matter.

Leaving aside the political part of the case, does any one suppose that the same effect and results, as now given by the Cable Companies, would be continued? Or that the low rates, which had been used to drive out of China two of the greatest foreign enterprises, would long be maintained by the Chinese Government?

It is not to be supposed that reduced rates would mean greatly increased traffic to the extent and certainly no less extent in China to indemnify the Companies for their losses. The "cheap rates" system, which works well in countries where there is no restriction in the correspondence, does not apply to China.

Even if rates were reduced to the lowest figure sufficient to cover only the actual maintenance and working expenses of the cables, which by necessity are very large, and out of comparison

with these of kindred, the figures are word would still be considerably above one dollar and could never reach a "popular minimum." The trade of China is not a factor to curtail the hopes of a large increase in business telegrams for a long number of years. But if more messages would be sent more than \$1.75, or even \$1.00, a word than now at the present rate. The returns from Press telegrams which are already sent at a much reduced rate, would necessarily be very limited and for private messages the rate would still be too high for the telegraph to be available of account in rare cases of urgent necessity.—N. C. D. City News

tion Engineer to the Railway Bureau, and had these were questions of the Utsui Pass only, doubtless the simplest and most familiar method of construction would have been chosen. But there are many places in Japan with which railway construction might be advantageously established did not engineering obstacles similar to those the Utsui Pass present themselves and the necessity of these future lines it was plainly desirable to introduce some system which might serve to perfect their construction. Hence the Railway Bureau decided that the railway over the Utsui Pass should be built on the Abt System. If the experimental proposal succeeded in this case, it has its extended use would constitute an important feature in the development of Japan's railways. The principal features of the

As the locomotive is thus free to disengage itself from the rails, the friction of smooth surfaces being dispensed on is the chief elements of traction in moving trains, the locomotive is fitted with cog wheels which work on rack rails. By this method a train can be dragged up steep inclines, and it has become possible to carry the iron road into mountainous districts previously considered inaccessible. There are, we believe, already in operation in Europe and elsewhere about 400 miles of lines constructed on this system, and in every case the method has proved successful. The distances to be traversed at the Great Pass is between four and two miles, and some of the gradients are as steep as 1 in 16. A few days ago the first trial of the locomotives took place. It proved a failure owing to circumstances easily explained. Evidently where the tracks found for the trucks a heavy load on steep incline is evaded by the action of cogged wheels and rack rails, the distribution of the strain upon the teeth of the cogged wheels is quite unbalancing skid, and centrifuge. A better method is to lay three parallel

rack rails at short intervals, their channels rearranged in slight echelon, while under the engine are two safely constructed wheels, each carrying three trucks of iron, and so on as to interlock into the channels of the rails. A certain amount of play is given to the tooth by an arrangement of springs, but the main object is that corresponding force on the face and back wheel must always bite the rack rails synchronously. Owing to some error on the manufacturer's part in making the various parts of one of the engines, the above condition was not fulfilled when the engine was put together, and the result was that, whereas the face gear wheel bit the rails sufficiently strongly, the back wheel over rode the channels, and some injury was suffered by the racks. The locomotive was immediately taken back to Shibatake, where the mistake has been corrected. Meanwhile, another locomotive, which is four in all—was put together, and have-

has been tested with an entirely satisfactory issue over a trial length of rock-ribs and Shinbuchi, it proceeds on Monday to the Utsi Dasi, where on the following day (Monday 25th), as a telegram received on that occasion informed us, it travels on without any hindrance from Kokobana to Kurawana and back again, thus achieving the distinction of being the first steam locomotive to cross the celebrated Utsi Dasi, the establishment of thorough connection by rail between the capital and the Western coast will be a welcome consummation. At present the railway is the last one to be completed of Ehigo, Etchu, and Shinano roads

virtually no access to any markets except those of the locality. Want of good roads tends to stifle the staple and the very source to the great consuming districts on the opposite side of the island, are almost prohibitory of water transport. But the opening of rail communication will cover the whole island and ought to prove an immense boon to the northwestern provinces. Moreover, the successful introduction of the Abt System at Gen will doubtless herald its employment at other points where, without such an adjunct, railway construction would not be possible. —*Japan Mail*

drawn in specially built alternators. Any speech can be represented by a curve, as drawn, for instance, by the old phonograph. The drawing is therefore built to give the curve corresponding with the advertisement, and in place of the usual monotone the machine is made to hum, say, "Someone's Soap," "Someone's Soap," in competition per revolution. Sounders are applied throughout the system of electrical distribution. To the case of the large city that has no such persistent but monotonous advertisement of "Someone's Soap, Someone's Soap," and when leaks, the remedy instead of bringing the machine into the square, is simply to change the machine.

"Советской Союз Республик Советской Союз"

